

CLAIMS

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1. A mobile communications terminal for use in a cellular communications system, comprising
- 5 an electronic circuit (200) for receiving a wire-less communications signal carrying signal channels having processing means for extracting the signal channels,
- characterized in that
- the electronic circuit (200) is adapted to classify a
- 10 type of interference, affecting the communications quality, by evaluating signals selected in the electronic circuit that are selected as signals having information for classifying a type of interference in one of at least two predetermined classes of interference.
- 15 2. A mobile communications terminal according to claim 1, characterized in that a first class of interference includes inter-cell interference and that a second class of interference includes intra-cell interference.
3. A mobile communications terminal according to any one
- 20 of claims 1 and 2, characterized in that the mobile communications terminal comprises first means (204) with selected signals for adaptively regulating the amplitude of signals processed by the electronic circuit.
4. A mobile communications terminal according to claim 3,
- 25 characterized in that the first means (204) includes Automatic Gain Control means.
5. A mobile communications terminal according to any one of claims 3 and 4, characterized in that the first means includes means (210) with selected signals for

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communicating commands of controlling transmitted power with a base station capable of communicating with a multitude of mobile communications terminals.

5 6. A mobile communications terminal according to any one of claims 1 through 5, characterized in that the mobile communications terminal comprises second means with selected signals for monitoring the communications quality (210).

10 7. A mobile communications terminal according to claim 6, characterized in that the second means includes means (210) for monitoring the signal strength of the received signal.

15 8. A mobile communications terminal according to any one of claims 6 and 7, characterized in that the second means includes means (210;603) for monitoring the signal-to-interference ratio, SIR, of the received signal.

20 9. A mobile communications terminal according to any one of claims 1 through 8, characterized in that the mobile communications terminal comprises means (210;604) for processing the communication signal in a first of at least two ways; the first way being selected from the at least two ways in dependence of a classified type of interference.

25 10. A mobile communications terminal according to any one of claims 1 through 9, characterized in that the mobile communications terminal comprises filter means (604) for processing the communication signal by means of a set of filter coefficients ( $\alpha$ ) selected in dependence of a classified type of interference.

30 11. A mobile communications terminal according to claim 10, characterized in that the filter means is a low-pass

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filter (604); wherein the filter has a relatively high  
band-width when interference is classified to be intra-  
cell interference and has a relatively low band-width  
when interference is classified to be inter-cell  
5 interference.

12. In a mobile communications terminal adapted for use  
in a cellular communications system a method comprising  
the steps of:

receiving a wire-less communications signal carrying  
10 signal channels and extracting the signal channels by  
means of an electronic circuit;

characterized in further comprising the step of:

classifying a type of interference, affecting the  
communications quality, by evaluating signals selected in  
15 the electronic circuit as signals having information for  
classifying a type of interference in one of at least two  
predetermined classes of interference.

13. A method according to claim 12 characterized in that  
the a first class includes intercell interference and  
20 that a second class includes intracell interference.

14. A method according to any one of claims 12 and 13  
characterized in that the method further comprises the  
step of processing the communication signal in a first of  
at least two ways (A1;A2); the first way being selected  
25 from the at least two ways in dependence of a classified  
type of interference.

15. A method according to any one of claims 12 through 14  
characterized in that the method further comprises the  
step of filtering the communication signal with a low-  
30 pass filter; wherein the filter has a relatively high

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band-width when interference is classified to be intra-cell interference and has a relatively low band-width when interference is classified to be inter-cell interference.